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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,623	02/11/2002	Mark N. Robins	10018045-1	4533

22879 7590 08/25/2006

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EXAMINER

NGUYEN, LUONG TRUNG

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/073,623	Applicant(s) ROBINS ET AL.	
	Examiner LUONG T. NGUYEN	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Amendment, filed on 6/12/2006, with respect to the rejections of independent claims 1, 10, 21 under Bell et al. (US 5,103,254) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Needham (US 6,803,945).

Claim Objections

2. Claims 3, 8, 10-20 are objected to because of the following informalities:

Claim 3 (line 5), "said current second image" should be changed to --said second image--.

Claim 3 (line 6), "previous first image" should be changed to --first image --.

Claim 8 (line 3), "a shutter button" should be changed to --the shutter button--.

Claim 10 (line 9), "a current image" should be changed to --the current image --.

Claims 11-20 are objected as being dependent on claim 10.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3-5, 7-15, 21-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Needham (US 6,803,945).

Regarding claim 1, Needham discloses an image capturing device, comprising:

an electronic image sensor (included in video camera, figures 3-4, column 5, lines 22-59);

a memory (included in video camera for operating flow chart in figures 3-4, column 3, lines 35-59) including a motion detect routine, a predetermined image interval, and at least one predetermined motion threshold; and

a processor (a processor, column 3, lines 35-43) communicating with said electronic image sensor, a shutter button (included in video camera), said processor being configured to:

(a) comparing a second image to a first image, wherein the second image is captured after the first image, to determine if motion between said second image and said first image is below said at least one predetermined motion threshold (comparing current frame and previous frame, steps 31, 33, figure 4, column 5, lines 23-59),

(b) store said second image as a final image if the motion between said second image and said first image is below said at least one predetermined motion threshold (steps 33, 32, 36, 37, figure 4, column 5, lines 23-59),

(c) capture a third image and compare the third image with the second image to determine if motion between said third image and said second image is below said at least one predetermined if the motion between said second image and said first image is not below said

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predetermined motion threshold (at step 33, if difference between current frame and previous frame is larger threshold and frame is not stabled as determined in step 36, another frame will be captured at step 31, figure 4).

Regarding claim 3, Needham discloses the processor is configured to compare a main object of the second image with a main object of the first image to determine if motion between said second image and said first is below said at least one predetermined motion threshold (step 33, figure 4).

Regarding claim 4, Needham discloses a number of regions data dividing a captured image into a plurality of image regions and wherein a region-by-region comparison is performed between two successive images (comparing pixel by pixel, column 4, lines 1-10).

Regarding claim 5, Needham discloses a motion detect variable (threshold, figure 4), wherein a motion detection is performed when said motion detect variable is set to an enable state (step 36, figure 4).

Regarding claim 7, Needham discloses the processor stores said current image as said final image when said current image is determined to be stable (steps 33, 32, 36, 37, figure 4, column 5, lines 23-59).

Regarding claim 8, Needham discloses the processor stores said current image as said final image when said current image is determined to be stable and the shutter button is detected (steps 33, 32, 36, 37, figure 4, column 5, lines 23-59).

Regarding claims 9, 12, 23, Needham discloses a hold timeout timer that stores a predetermined hold timeout period and wherein said current image is stored as a final image if said hold timeout timer expires (time duration, column 4, lines 23-41).

Regarding claim 10, Needham discloses an image capturing method, comprising the steps of:

detecting a shutter button (included in video camera for capturing a current frame, figure 4) press in order to initiate the image capturing method;

capturing a previous image (capturing a previous frame, figure 4, column 5, lines 23-59);
capturing a current image (capture a current frame, step 31, figure 4, column 5, lines 23-59);

comparing said current image and one or more previous images (step 33, figure 4, column 5, lines 23-59);

determining if said current image is stable with regard to motion (step 36, figure 4, column 5, lines 23-59);

converting said current image to be said previous image and repeating the step of capturing a new image as said current image and repeating the steps of comparing and

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determining if said current image is not stable (step 36 then step 31, figure 4, column 5, lines 23-59);

wherein the step of capturing a current image and the steps of comparing and determining are repeated until said current image is determined to be stable (figure 4).

Regarding claims 11, 14 and 22, Needham discloses storing said current image as a final image (steps 33, 32, 36, 37, figure 4, column 5, lines 23-59).

Regarding claims 13, 24, Needham discloses the step of waiting a predetermined image interval between image captures (predetermined interval, column 3, lines 36-59).

Regarding claims 15, 25, Needham discloses wherein the step of comparing compares all pixels in said current image and in said previous image (column 4, lines 1-10).

Regarding claim 21, claim 21 is a method claim of apparatus claim 1. Therefore, claim 21 is rejected for the reason given in claim 1.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 2, 16-20, 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Needham (US 6,803,945) in view of Bell et al. (US 5,103,254).

Regarding claims 2, 16, 26, Needham fails to specifically disclose a predetermined sampling pattern of pixels to be sampled in a captured image and wherein a comparison is performed on pixels included in said predetermined sampling pattern. However, Needham teaches a camera comprises motion detector 72 which detects motion by comparing desired portions of the images (sampling pattern of pixels, column 5, lines 40-62). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Needham by the teaching of Bell et al. in order to reduce time in detecting motion.

Regarding claims 17, 27, Needham fails to specifically disclose the step of comparing compares a predetermined region in said current image and in said previous image. However, Needham teaches a camera comprises motion detector 72 which detects motion by comparing desired portions of the images (sampling pattern of pixels, column 5, lines 40-62). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Needham by the teaching of Bell et al. in order to reduce time in detecting motion.

Regarding claims 18-19, 28-29, Needham fails to specifically disclose the step of comparing compares a user-designated region in said current image and in said previous image. However, Needham teaches a camera comprises motion detector 72 which detects motion by

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comparing desired portions of the images (sampling pattern of pixels, column 5, lines 40-62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Needham by the teaching of Bell et al. in order to reduce time in detecting motion.

Regarding claims 20, 30, Needham fails to specifically disclose the step of comparing compares a plurality of regions in said current image to a corresponding plurality of regions in said previous image, and wherein said current image is determined to be stable when all regions in said plurality of image regions are determined to be stable. However, Needham teaches a camera comprises motion detector 72 which detects motion by comparing pixels in the first outline with pixels in second outline (steps 150-152, figures 11a-11c, column 5, lines 29-62). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Needham by the teaching of Bell et al. in order to reduce time in detecting motion.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Needham (US 6,803,945).

Regarding claim 6, Needham fails to specifically disclose said predetermined motion threshold is user-settable. However, Official Notice is taken that it is well known in the art to let the user sets a desired threshold in determining motion. Doing so, the user can obtain desired picture.

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Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUONG T. NGUYEN whose telephone number is (571) 272-7315. The examiner can normally be reached on 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID L. OMETZ can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LN
8/17/06



**LUONG T. NGUYEN
PATENT EXAMINER**